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Approximation of sign-indefinite spectral problems

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Abstract

A variational sign-indefinite eigenvalue problem in an infinite-dimensional Hilbert space is approximated by a problem in a finite-dimensional subspace. We analyze the convergence and accuracy of approximate eigenvalues and eigenelements. The general results are illustrated by a sample scheme of the finite-element method with numerical integration for a one-dimensional sign-indefinite second-order differential eigenvalue problem. © 2012 Pleiades Publishing, Ltd.

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